

2.25 Hurricane Evacuation – The Coastal Construction Control Line Program

A. Introduction and Background.

In 1971, the Florida State Legislature enacted Chapter 161, F. S. the "Florida Beach and Shore Preservation Act." Section 161.053, F. S. of the Act gave the Department of Natural Resources (and now its predecessor the Department of Environmental Protection (DEP)) responsibility to establish a Coastal Construction Setback line (CCSL) along the Atlantic and Gulf coasts, in 24 coastal counties. The CCSL defines the portion of the beach-dune system, which is subject to severe fluctuations based on a 100-year storm surge, storm waves or other predictable weather conditions. The setting of this line was based on a compilation of data from engineering and topographic surveys, erosion trends, predictable storm tides, wave run-up, vegetation line location and other technical data. In 1978 the State CCSL was later renamed as the Coastal Construction Control Line (CCCL).

In April 1973, the Collier County Board of Commissioners established a building setback line from the Gulf of Mexico (Ord. 73-5). The setback line was imposed on new construction bordering the Gulf of Mexico to protect property and assist in the prevention of beach erosion, because, "man-made structures and fixtures exposed to the uprushing waters cause or result in increased erosion of the foreword shore...." In July 1975, the Collier County Board of Commissioners adopted the State established Coastal Construction Setback Line pursuant to Section 161.053 of the Florida Statutes (Ordinance 75-19). This line is the County's current CCSL and is the line for which staff reviews petitions for issuing variances for construction seaward of the CCSL.

In 1988, Collier County became the 15th coastal county to have the review studies of the State CCCL as required by F.S. 161.053 (Beaches and Shores Resources Center, 1988). The current state CCCL was recorded in June 1989, six months after the adoption of Collier County's 1989 GMP. The Coastal Construction Control Line (CCCL) that is contained in the County's current GMP refers to the 1978 State CCCL which is the same as the County's CCSL. Since the state revised its line in 1989 after the adoption of the County's GMP, the existing Policy references to the CCCL should be changed to the CCSL, Maps 2.25-2 thru 2.25-7 that compare the CCSL versus CCCL along the beach coastline starting from the Collier-Lee County line to the city limits of Marco Island:

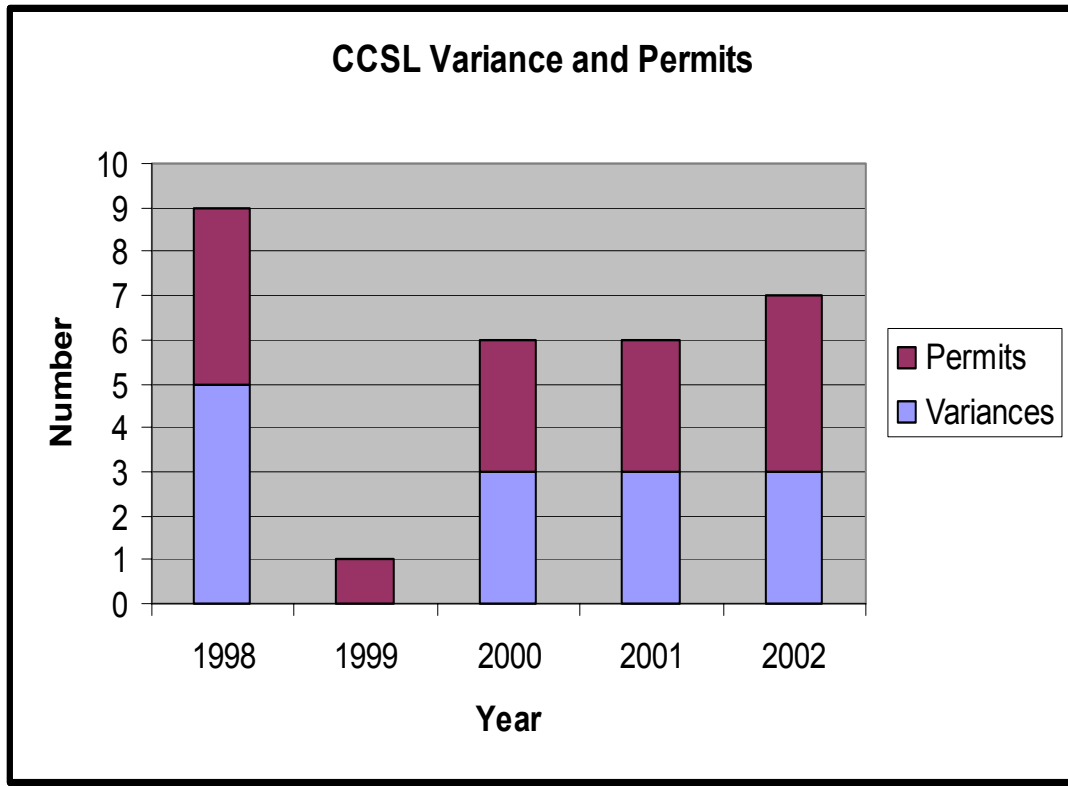
Maps showing the selected representative locations of the County's CCSL and the State's CCCL are located after Map 2.25-1 in this section. On average, the State's CCCL is 184 feet further landward then the County's CCSL.

B. Identification of Specific Objectives and Implementation Activities:

The County issues both CCSL Permits and Variances. Variances to the CCSL may be obtained by petition to the Board of County Commissioners, public notice and hearing. Prohibited activities seaward of the CCSL include the following:

1. Constructing a structure
2. Excavation
3. Removing beach material
4. Altering existing ground elevations
5. Driving a vehicle on, over or across any sand dune
6. Damaging or causing to be damaged sand dunes or the vegetation growing thereon.

Figure 2.25-1



Proposed development seaward of the State's CCCL is reviewed for consistency with the County's GMP. The County has adopted the Florida Building Code and applies these standards for issuing building permits for structures seaward of the State's CCCL. FEMA requirements, which limit that type of construction below flood elevation, also apply.

C. Data Assessment:

Staff conducted a GIS analysis to evaluate the amount of development that has occurred seaward of the CCSL and CCCL and U.S. 41. The methodology used in this analysis is specified in Exhibit A which follows Map 2.25-1 in this section. By comparing 1995 aerials to 2002 aerials, staff was able to estimate the amount of development that has occurred seaward of these boundaries during this timeframe. The results of this analysis are summarized in Table 2.25-1.

Table 2.25-1

Estimated Development between 1995 and 2002-- GIS Parameter Analyzed	Coastal Construction Setback Line (CCSL)	Coastal Construction Control Line (CCCL)	US 41
No. of buildings and total acreage for the buildings seaward of and intersecting the referenced line	9 buildings 0.77 acres	45 buildings 3.69 acres	2,166 buildings 223.29 acres
Acreage of the buildings seaward of the referenced line	0.42 acres	3.67 acres	223.29 acres
Acreage of the entire parcel intersecting the referenced line	41.73 acres	50.06 acres	2,353.23 acres
Acreage of the parcel that is seaward of the referenced line	9.97 acres	36.60 acres	2,353.23 acres

D. Objective and Analysis

Only 45 additional structures were found to be located seaward of the State's CCCL. Of those 45 structures, 9 structures were found seaward of the CCSL in the 7 years evaluated between 1995 and 2002. This analysis also indicates that amount of acreage built seaward of the County's CCSL is approximately 0.42 acres (less than 20,000 square feet).

E. Conclusion

Since the state revised its line in 1989 after the adoption of the County's GMP, the existing policy references to the CCCL should be changed to refer to the County's CCSL. See Table 2.25-2.

Table 2.25-2. Analysis of Objectives relating to the Coastal Control Line Issue			
CCME Objectives Linked to the Issue	Extent to which Objectives have been achieved	Unanticipated Changes Resulting in Problems or Opportunities	Recommendations
OBJECTIVE 10.3: Undeveloped coastal barriers shall be maintained predominantly in their natural state and their natural function shall be protected, maintained and enhanced.	This Objective has been achieved. Policy 10.3.6 allows for certain exceptions: Prohibit construction of structures seaward of the Coastal Construction Control Line on undeveloped coastal barriers. Exception shall be for passive recreational structures access crossovers, and where enforcement would not allow any reasonable economic utilization of such property. In the latter event, require construction that minimizes interference with natural function of such coastal barrier system.	The 1989 GMP referred to the State's 1978 CCCL which was subsequently changed by the State after the County's Plan was adopted. The following policy should refer to the Coastal Construction Setback line (CCSL) instead of the CCCL.	Maintain the current objective but amend Policy 10.3.6 to refer to the Coastal Construction Setback line (CCSL).

Table 2.25-2. Analysis of Objectives relating to the Coastal Control Line Issue

CCME Objectives Linked to the Issue	Extent to which Objectives have been achieved	Unanticipated Changes Resulting in Problems or Opportunities	Recommendations
<p>OBJECTIVE 10.4: Developed coastal barriers and developed shorelines shall be continued to be restored and then maintained, when appropriate by establishing mechanisms or projects which limit the effects of development and which help in the restoration of the natural functions of coastal barriers and affected beaches and dunes.</p>	<p>This Objective has been achieved. Policy 10.4.7 and 10.4.8 allow for certain exceptions:</p> <p>Prohibit construction seaward of the Coastal Construction Control Line except where the same would be permitted pursuant to the provisions of the Florida Coastal Zone Protection Act of 1985 or where said prohibition would result in no reasonable economic utilization of the property in questions, or for safety reasons. In such cases, construction will be as far landward as is practicable and effects shall be minimized on the beach and dune system and the natural functions of the coastal barrier system.</p>	<p>The 1989 GMP referred to the State's 1978 CCCL which was subsequently changed by the State after the County's Plan was adopted. The following policy should refer to the Coastal Construction Setback line (CCSL) instead of the CCCL.</p>	<p>Maintain the current objective but amend Policy 10.4.7 and Policy 10.4.8 to refer to the Coastal Construction Setback line (CCSL).</p>

Table 2.25-2. Analysis of Objectives relating to the Coastal Control Line Issue			
CCME Objectives Linked to the Issue	Extent to which Objectives have been achieved	Unanticipated Changes Resulting in Problems or Opportunities	Recommendations
<p>OBJECTIVE 10.4, continued: Developed coastal barriers and developed shorelines shall be continued to be restored and then maintained, when appropriate by establishing mechanisms or projects which limit the effects of development and which help in the restoration of the natural functions of coastal barriers and affected beaches and dunes.</p>	<p>Policy 10.4.8: Construction seaward of the Coastal Construction Control Line will be allowed for public access and protection and restoration of beach resources. Construction seaward of the Coastal Construction Control Line shall not interfere with sea turtle nesting, will utilize native vegetation for dune stabilization, will maintain the natural beach profile, will minimize interference with natural beach dynamics, and where appropriate will restore the historical dunes and will vegetate with native vegetation.</p>		

Table 2.25-2. Analysis of Objectives relating to the Coastal Control Line Issue			
CCME Objectives Linked to the Issue	Extent to which Objectives have been achieved	Unanticipated Changes Resulting in Problems or Opportunities	Recommendations
OBJECTIVE 10.5: For undeveloped shorelines, provide improved opportunities for recreational, educational, scientific, and esthetic enjoyment of coastal resources by protecting beaches and dunes and by utilizing or where necessary establishing construction standards, which will minimize the impact of manmade structures on the beach and dune systems.	<p>This Objective has been achieved. Policy 10.4.5.8 allows for certain exceptions:</p> <p>Prohibit construction of any structure seaward of the Coastal Construction Control Line. Exception shall be for passive recreational structures access crossovers, and where enforcement would not allow any reasonable economic utilization of such property. In the latter event, require construction that minimizes interference with natural function of such beaches and dunes</p>	<p>The 1989 GMP referred to the State's 1978 CCCL which was subsequently changed by the State after the County's Plan was adopted. The following policy should refer to the Coastal Construction Setback line (CCSL) instead of the CCCL.</p>	<p>Maintain the current objective but amend Policy 10.5.4 to refer to the Coastal Construction Setback line (CCSL).</p>

Map 2.25-1

Selected Locations Illustrating the Difference between the Coastal Construction Setback Line (CCSL) and the Coastal Construction Control Line (CCCL)

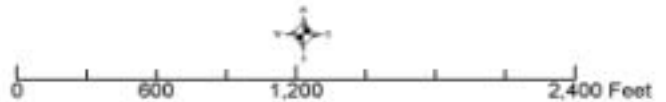
County Coastal Constnution Setback and State Coastal Constnution Control Lines
Lely Barefoot Beach **Vanderbilt Beach to Pelican Bay**



Legend

- County Coastal Construction Setback Line
- State Coastal Construction Control Line

Data Source: Aerial - Gulf County Property Appraiser 2002
 Created by GIS-CDES / Environmental Services
 010817MapCCCL_CCSL.mxd
 C:\projects\cccl\cccl_010817.mxd
 Date 10/1/03



GIS Analysis of Development in the Coastal Area

Building analysis

A digital GIS layer containing all buildings present in Collier County in 2002 was overlaid onto a 1995 Digital Ortho Quarter Quad (DOQQ) aerial. All buildings present in 2002 along the Collier County coastline (excluding The City of Naples, The City of Marco Island and Everglades City) were visually compared to the buildings present on the 1995 DOQQ aerial. Those buildings not present on the 1995 DOQQ aerial were recorded. The total acreage of the buildings built westward of the coastal setback lines and US 41 from 1995-2002 was then calculated. Only the acreage utilized for the building footprints was calculated. Land utilized for any development other than the building footprints was not included in the analysis.

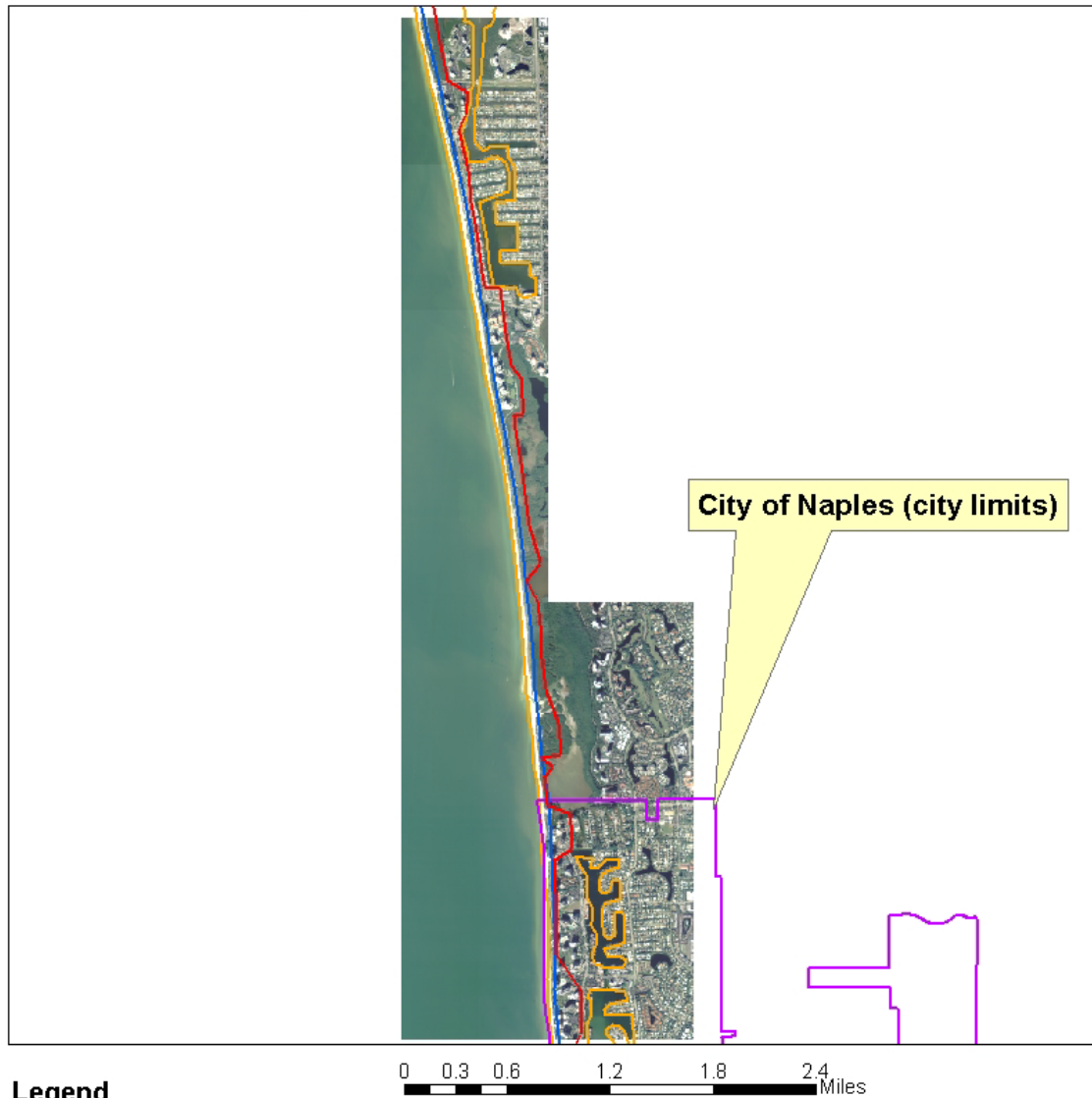
Parcel analysis

A digital GIS layer containing all buildings present in Collier County in 2002 was overlaid onto a 1995 DOQQ aerial. All buildings present in 2002 along the Collier County coastline (excluding The City of Naples, The City of Marco Island and Everglades City) were visually compared to the buildings present on the 1995 DOQQ aerial. Those buildings not present on the 1995 DOQQ aerial were recorded. The total acreage of the parcels on which the buildings were built westward of the coastal setback lines and US 41 from 1995-2002 was then calculated. These calculations were made with the assumption that the entire parcel of land where a building stands was developed. Parcels where development other than the construction of buildings occurred were not included in the analysis.

Map 2.25-2: CCSL versus CCCL



Map 2.25-3: CCSL versus CCCL



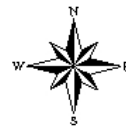
Legend

- Coastal Construction Control Line
- Coastal Construction Setback Line

Cities

NAME

- City of Marco Island (city limits)
- City of Naples (city limits)
- Collier County



Map 2.25-4: CCSL versus CCCL



Legend

- Coastal Construction Control Line
- Coastal Construction Setback Line

Cities

NAME

- City of Marco Island (city limits)
- City of Naples (city limits)



Map 2.25-5: CCSL versus CCCL



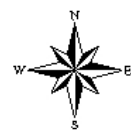
Legend

- Coastal Construction Control Line
- Coastal Construction Setback Line

Cities

NAME

- City of Marco Island (city limits)
- City of Naples (city limits)



Map 2.25-6: CCSL versus CCCL



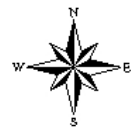
Legend

- Coastal Construction Control Line
- Coastal Construction Setback Line

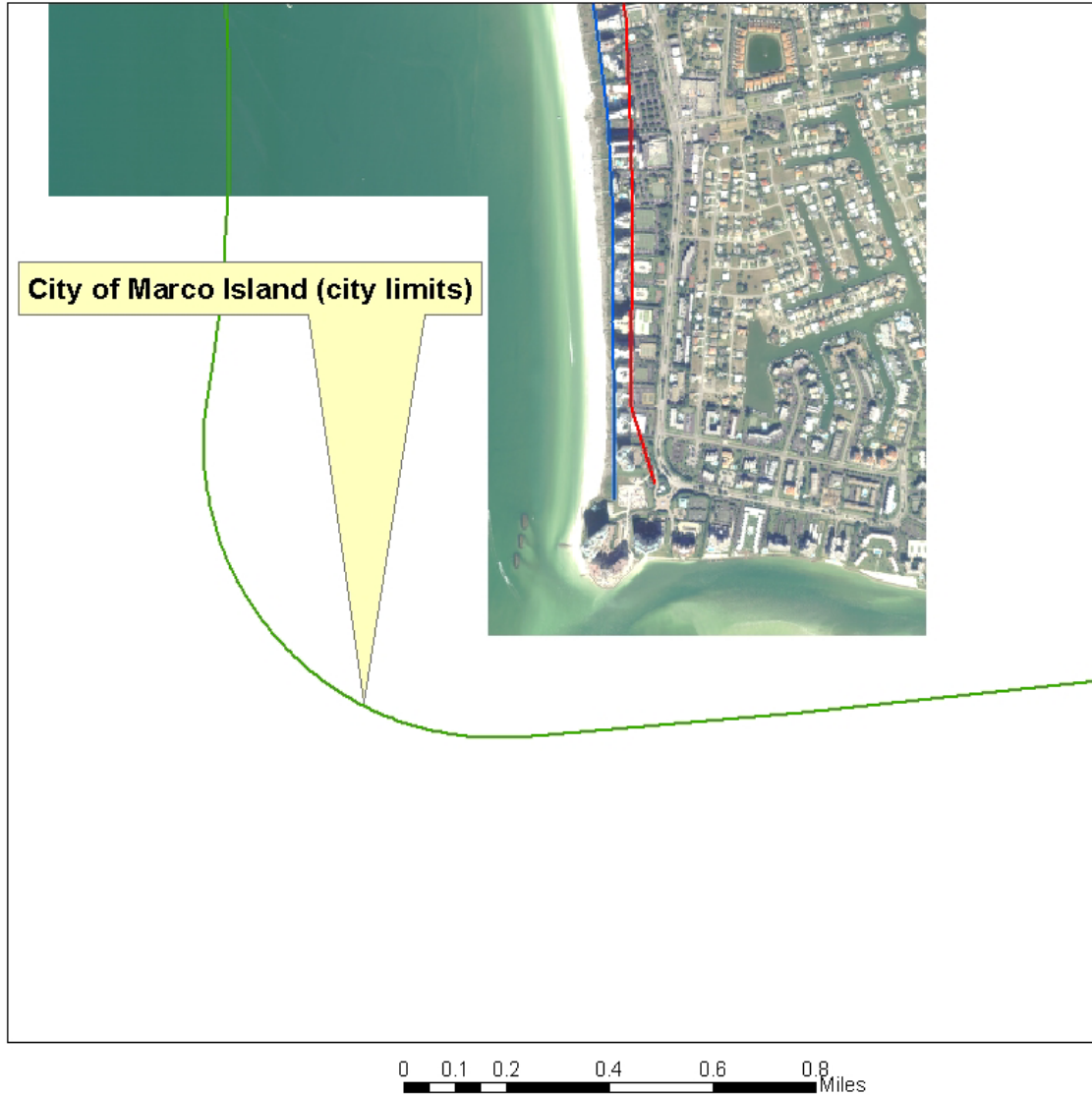
Cities

NAME

- City of Marco Island (city limits)
- City of Naples (city limits)



Map 2.25-7: CCSL versus CCCL



Legend

- Coastal Construction Control Line
- Coastal Construction Setback Line

Cities

NAME

- City of Marco Island (city limits)
- City of Naples (city limits)

